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AIR COMMAND AND STAFF COLLEGE

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**UNITED STATES SPECIAL OPERATIONS COMMAND: BLUE
FORCE TRACKING SUPPORT FOR SPECIAL OPERATIONS
FORCES**

by

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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14. ABSTRACT

The dimension of the battlefield can change as rapidly as the capabilities used on the battlefield. Despite all the controversies surrounding the expenses associated with the defense of our great nation, the single most valuable asset the United States military can utilize to accomplish military objectives is its people. This paper will discuss a relatively new capability used on the battlefield that will allow commanders at all levels an opportunity to better accomplish their mission and save lives: Blue Force Tracking (BFT). BFT utilizes a family of systems to bring battlefield situational awareness to the commander in order to provide the commander increased decision making capabilities. BFT can change the way forces are commanded and controlled, and can be used as a tool to reduce fratricide events that harm American forces and those of our allies. The recent explosion in BFT requirements has made it very difficult to equip deployed special operations forces (SOF) with enough BFT capabilities to satisfy operational requirements. Inadequate BFT program funding and bureaucratic inertia have resulted in an excessively long device procurement process. Funding issues and bureaucratic inertia have repeatedly created roadblocks that have caused unacceptable delays and prohibited forces from fully complying with operational requirements. This has frustrated SOF providers who are unable to satisfy deployed SOF requirements or maintain critical situational awareness of SOF involved in combat operations. The absence of programmatic authority has resulted in the proliferation of non-standardized BFT device purchases. This indicates the importance of BFT capabilities but raises concern over the standardization and integration of BFT devices. In addition, BFT training is required at all levels in the chain of command so that SOF operators and leaders can better understand the capabilities available to them for decision making purposes. USSOCOM is in a position to leverage unique authorities and capabilities as a force-providing combatant command to enhance BFT support. With minimal effort, there are a number of support efforts USSOCOM can promote to contribute to lasting contributions of future special blue force tracking capabilities for special operations forces. This unique position can provide an invaluable tool to deployed special operations forces, better satisfy SOF mission requirements, alleviate the scarcity of mission critical blue force tracking capabilities, and promote effective training opportunities. In a world of limited resources and competing requirements, there are always constraints and battles for those resources to support the countless arrays of requirements. BFT is a worthy contender for resources, and USSOCOM in its role as a provider of elite forces and capabilities, is in a position to expend limited effort to achieve great rewards for the future benefit of the special operations community.

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Contents

	<i>Page</i>
DISCLAIMER	II
PREFACE	IV
ABSTRACT	VI
INTRODUCTION	1
Research Methodology	4
BFT History	4
REQUIREMENTS.....	6
TSOC Requirements.....	7
SOF Requirements.....	8
COP Capabilities	9
Initial BFT Fielding	11
PROGRAMMATICS.....	14
BFT Program	15
CONCLUSIONS AND RECOMMENDATIONS	18
Funding	19
Standardization and Integration.....	19
Single Card Solution.....	20
Training	21
GLOSSARY	24
BIBLIOGRAPHY	26

Preface

In 2001, while a member of the Florida Air National Guard, I was introduced to a few gentlemen from Headquarters, United States Special Operational Command (USSOCOM) whom I found to be not only professional, but extremely dedicated to providing value to special operations efforts in support of national objectives. This inspired me to take a chance, and a break, from the relatively comfortable yet high-speed corporate world, to performing a manpower tour at USSOCOM. Not only did this turn out to be every bit as high speed as the corporate world, but turned out to be far more rewarding. I was fortunate enough to get into projects that became increasingly important to deployed special operators on a daily basis, and work with top notch professionals, and I haven't looked back since.

I learned about blue force tracking at its infancy stage, through a project that brought the common operational picture to life at USSOCOM, and realized there was huge potential for this utility in changing the way we viewed the battlefield. This was a no-kidding capability that could allow greatly increased situational awareness of friendly forces on the battlefield, leading to an increased ability to not only locate and extract friendly forces when needed, but mitigate the chance of friendly fire and save valuable American lives. The increasing operational demand for this capability by the true special operations warfighter has afforded me the opportunity to engage in advocating and providing this capability, as well as fueled the writing of this paper.

There are a host of people that have helped me get where I am, and considering the limited space I have to express my gratitude and risk of excluding certain people, I will limit this to some of the immediate people that were key to completion of this paper.

I'd like to extend a special thank you to two gentlemen whom inspired me to write this paper, and whose guidance saved me from pulling out the few hairs I have left on my head, Colonel Edward Brasher and Commander Todd Russell, both highly intelligent and well regarded retired military officers who continue providing invaluable support as USSOCOM contractors. These guys have educated me, mentored me, and put up with me throughout my eight years tenure at USSOCOM and during the creation of this paper. Should this paper provide meaning or benefit to readers, I attribute their guidance; should it fall short of meeting expectations, that fault would be my doing.

I'd like to recognize my course instructor, Dr John Reese, for his support, guidance, and contribution to my academic background. His efforts to keep me on track kept me from straying off into foreign territory that could have easily lead to a much longer and harder path than necessary. Not only does he bring unique perspectives to the course, but he clearly demonstrates a commitment to excellence along with a sincere appreciation and understanding of student efforts.

Lastly, this project, and more importantly the opportunity to attend this course, would not have been possible without the loving support and patience of my wife, Heather, and daughters, Sophia and Ella. Their love and understanding has made difficult professional tasks, decisions, and endeavors seem somehow easy. This paper took family time away from them, and me; precious time that we so enjoy together. Thank you to my loving girls, the reason I do what I do!

Abstract

The dimension of the battlefield can change as rapidly as the capabilities used on the battlefield. Despite all the controversies surrounding the expenses associated with the defense of our great nation, the single most valuable asset the United States military can utilize to accomplish military objectives is its people. This paper will discuss a relatively new capability used on the battlefield that will allow commanders at all levels an opportunity to better accomplish their mission and save lives: Blue Force Tracking (BFT).

BFT utilizes a family of systems to bring battlefield situational awareness to the commander in order to provide the commander increased decision making capabilities. BFT can change the way forces are commanded and controlled, and can be used as a tool to reduce fratricide events that harm American forces and those of our allies.

The recent explosion in BFT requirements has made it very difficult to equip deployed special operations forces (SOF) with enough BFT capabilities to satisfy operational requirements. Inadequate BFT program funding and bureaucratic inertia have resulted in an excessively long device procurement process. Funding issues and bureaucratic inertia have repeatedly created roadblocks that have caused unacceptable delays and prohibited forces from fully complying with operational requirements. This has frustrated SOF providers who are unable to satisfy deployed SOF requirements or maintain critical situational awareness of SOF involved in combat operations. The absence of programmatic authority has resulted in the proliferation of non-standardized BFT device purchases. This indicates the importance of BFT

capabilities but raises concern over the standardization and integration of BFT devices. In addition, BFT training is required at all levels in the chain of command so that SOF operators and leaders can better understand the capabilities available to them for decision making purposes.

USSOCOM is in a position to leverage unique authorities and capabilities as a force-providing combatant command to enhance BFT support. With minimal effort, there are a number of support efforts USSOCOM can promote to contribute to lasting contributions of future special blue force tracking capabilities for special operations forces. This unique position can provide an invaluable tool to deployed special operations forces, better satisfy SOF mission requirements, alleviate the scarcity of mission critical blue force tracking capabilities, and promote effective training opportunities.

In a world of limited resources and competing requirements, there are always constraints and battles for those resources to support the countless arrays of requirements. BFT is a worthy contender for resources, and USSOCOM in its role as a provider of elite forces and capabilities, is in a position to expend limited effort to achieve great rewards for the future benefit of the special operations community.

Part 1

Introduction

Blue Force Tracking displays enhance commanders' situational awareness, providing them the opportunity for quicker, more-refined analyses, decision making, and operational execution.

—NRO Statement to House Armed Services Committee

Technological advancements have changed the dimension of war and provided unprecedented capabilities to the modern warfighter. The continued quest for, and utilization of, information superiority has historically provided a strategic, operational, and tactical advantage for the United States Armed Forces over adversary forces. Information superiority has provided technological advantages in warfare environments and offered improved opportunities for successful operations. Blue Force Tracking (BFT) is a prime example of a rapidly evolving technological capability that has become a key tool used in mission planning, training and execution.¹

BFT is a tool, or capability, that provides commanders at the strategic, operational, and tactical levels with timely and accurate situational awareness of their forces through the use of digital transmissions. Transmitted data includes the location, identification information and other important command and control (C2) data associated with troops, platforms or other critical assets. That data is relayed electronically through modernized, state-of-the-art communication infrastructures that span from the operator to the commander. BFT transmissions provide commanders quick and accurate answers to paramount questions such as

“where are my forces”, “where are my forces in relation to hostile forces”, and “what is my forces’ status” that are required to command and control forces effectively.² This relatively new C2 capability utilizes existing infrastructures and global positioning capabilities coupled with automated communications and software technologies.

Special operations forces (SOF) typically operate with a minimal footprint, most often in austere and remote environments. The ability of a commander to maintain situational awareness of rapid SOF movement on the battlefield through the use of a computer display allows a greater amount of information for decision making to enhance operational effectiveness and prevent fratricide.³ Issues surrounding SOF utilization of BFT are inherent in the fact that it is a relatively new capability and has not gone through the growing pains that most fielded capabilities go through. In particular, the ever-increasing requirements imposed by geographic commanders for SOF to bring BFT capabilities with them to theater have posed a challenge to SOF’s ability to satisfy the operational demands for BFT.

The recent explosion in BFT requirements has made it very difficult to equip deployed SOF with enough BFT capabilities to satisfy operational requirements. Theater Special Operations Commands (TSOCs), in particular, have been overwhelmed with BFT operational requirements and underwhelmed with BFT resources to provide required BFT capabilities to deployed SOF. The lack of adequate program funding has greatly contributed to the inability to obtain BFT capabilities to satisfy SOF operational requirements. This is partly because, as an unfunded program, BFT must obtain funding through unfunded requirement avenues and often competes with a long list of unfunded requirements that are prioritized at the component command, not TSOC, level. The lack of program funding also restrains the ability of program managers to procure BFT capabilities since procurement contract authorities are usually linked to

authorized basis of issue requirements and allocated funding resources. The result of valiant program efforts often results in bureaucratic inertia, an excessively long device procuring process, and a frustrated TSOC or component command that is unable to satisfy deployed SOF requirements or maintain critical situational awareness of SOF involved in combat operations. The absence of programmatic authority has resulted in the proliferation of non-standardized BFT device purchases by TSOC and component commands as they do what they can to satisfy mission requirements. Their efforts indicate the importance of BFT capabilities but raise concern over the standardization and integration of BFT devices. In addition, BFT training is required at all levels in the chain of command. Training is not required just for deployed SOF operators, but for the strategic, operational, and tactical commanders so that they can better understand the capabilities available to them for decision making purposes.

This paper will identify and discuss the unique position that Headquarters, United States Special Operational Command (USSOCOM) holds as the functional combatant command for global SOF assets of the United States of America. This unique position affords USSOCOM the ability to leverage certain Service-like authorities and capabilities as a force providing combatant command to enhance BFT program support and provide combat-ready SOF to achieve operational success on the battlefield.⁴ This can greatly impact the ability of SOF leadership to better satisfy TSOC SOF mission requirements and alleviate the scarcity of mission critical BFT capabilities. There are a number of support efforts that USSOCOM can promote to contribute to enhanced overall SOF BFT capabilities, improve situational awareness of deployed SOF forces, and most importantly, save lives.

This paper will begin by taking a historical look at how BFT came to fruition and has since rapidly evolved into a significant operational capability for deployed special operators. This

paper will discuss issues involved with equipping deployed SOF with required BFT capabilities. Specifically, this paper will focus on issues affecting the ability of USSOCOM and the TSOCs to meet the increasing demands for BFT capabilities required by deployed SOF personnel. This study will conclude by recommending how USSOCOM can help increase the efficiency and effectiveness of BFT support to satisfy SOF operational requirements, primarily through the TSOCs, to support the Global War on Terror.

Research Methodology

The research method used for this paper is the problem/solution method. The problem examined is the inability, of TSOCs in particular, to provide sufficient BFT capabilities to meet the increasing operational demands on deployed SOF by geographic combatant commanders while operating in their respective area of operation. This paper explores and recommends potential efforts that USSOCOM may provide or support to further enhance the acquisition and fielding of TSOC BFT capabilities for deployed SOF, along with essential BFT training requirements.

BFT History

The United States (U.S.) Army is recognized for experimenting with BFT capabilities in the mid 1990s and continues to laud BFT successes for providing significant improvements in situational awareness and mission effectiveness.⁵ BFT is used not only for maintaining situational awareness of friendly forces, but is also used, in conjunction with a common operational picture (COP), to maintain awareness of friendly positions in relationship to hostile forces in order to provide commanders a more complete, graphical depiction of operating areas. The operational advantages afforded by BFT were quickly recognized and embraced by other

services and SOF to enhance strategic, operational, and tactical capabilities. In addition, the immense contributions to situational awareness provided by BFT have perpetuated a significant reduction in fratricide incidents (the unintended killing of friendly forces).⁶

BFT demonstrated mission importance to deployed SOF during Operation IRAQI FREEDOM as a significant enhancement to operational communications and intelligence, surveillance, and reconnaissance information (ISR). General Bryan D. Brown, former Commander of USSOCOM, attributed numerous SOF battlefield successes to BFT by stating that “We were able to provide superb situational awareness of SOF internally and with our war fighting partners – on the ground, sea, and air due to proactive fielding of BFT beacons.”⁷ The direct contributions provided by BFT allowed Joint Force Commanders to more effectively exercise command and control of deployed SOF. “The precision with which these systems operate significantly improves the speed and accuracy of the information that commanders at all levels exchange, both vertically and laterally, thereby enhancing their awareness of the operational environment. Effective command at varying operational tempos requires timely, reliable, secure, interoperable, and sustainable communications.”⁸ BFT capabilities have demonstrated current utility and future promise in satisfying operational demands for enhanced communication abilities and dramatically improved battlespace situational awareness.

Part 2

Requirements

The overall effectiveness of BFT in support of special operations was exceptional [during OIF]. While not all SOF were equipped with BFT devices, BFT systems facilitated coordinated events during combat operations, enhanced tactical resupply efforts, reduced recovery time for SOF extractions (both extemis and scheduled) and saved lives.

—General Bryan D. Brown

Without a doubt, BFT reduced the potential for fratricide events during Operation Iraqi Freedom and was the first positive step toward eliminating fratricide altogether.

—General Bryan D. Brown

BFT capabilities are increasingly incorporated into mission planning to satisfy operational requirements. BFT capabilities are critical to obtaining accurate position location information on friendly, or blue force personnel, equipment, and other military assets to reduce fratricide and increase battlefield awareness.⁹ The delicate balance of satisfying operational requirements with limited resources has often forced USSOCOM and the TSOCs into a position where they are unable to satisfy every operational requirement demanded of them. For example, possessing a limited number of BFT devices shortly after the initiation of Operation ENDURING FREEDOM (OEF), TSOC leadership, specifically those with forces in the United States Central Command area of responsibility, had to make difficult choices concerning the distribution of these scarce assets. Leadership had to choose between strictly limiting these assets to U.S. SOF and sharing these assets with coalition partners. Decisions had to be made based on mission priorities,

requirements, and higher headquarters direction. In some cases, the decisions added difficulty because priorities, requirements, and direction between headquarters and Commands conflicted.

TSOC Requirements

To fully understand the employment issues related to BFT, one must understand the relationship between the TSOCs, Combatant Commands and USSOCOM. One must also be aware of TSOC responsibilities. TSOCs were established in 1988 to address theater specific SOF requirements. They are subordinate unified commands charged with training, preparing, and managing service-provided SOF personnel. When required, TSOCs ensure full employment, integration, and synchronization of SOF strategic and operational capabilities with the planning and employment of conventional military operations.¹⁰ TSOCs typically maintain operational control (OPCON) of SOF forces when deployed to a regional combatant commander's geographic area of responsibility. TSOCs report directly to regional combatant commanders, however, they are provided some funding and personnel through HQ USSOCOM.¹¹

TSOCs are charged with exercising command and control over, and satisfying the operational equipment requirements of SOF forces allocated to their respective geographic theaters of operation or other area of operation where SOF mission support may be required. SOF forces are allocated to TSOCs through USSOCOM force management policies and procedures and supplied to TSOCs from USSOCOM service specific component commands to satisfy TSOC operational requirements. The Commander of USSOCOM has Title 10 authorities and responsibilities to provide ready, trained, and equipped SOF to Theater Commanders.¹² USSOCOM performs Title 10 functions though its component commands (U.S. Army Special Operations Command, Air Force Special Operations Command, Naval Special Warfare Command, and Marine Corps Forces Special Operations Command) to best tailor service

capabilities in order to most effectively support SOF requirements.

With the recent establishment of Special Operations Command (SOC), Africa Command (SOCAFRICA), there are now a total of seven TSOCs plus one special operations division (SOD). Of the seven TSOCs, five directly support specific regional combatant commanders and two are engaged in different SOF missions. The five TSOCs that directly support regional combatant commanders are: SOC, Southern Command (SOCSOUTH); SOC, Pacific Command (SOCPAC); SOC, Central Command (SOCCENT); SOC, Europe (SOCEUR); and SOCAFRICA. The two other TSOCs are SOC, Joint Forces Command (SOCJFCOM), who is responsible for worldwide training and integration of SOF forces with conventional joint forces, and SOC Korea (SOCKOR) who is designated as a SOF component command of U.S. Forces Korea (USFK).¹³ In addition to the seven TSOCs, there is one SOD that performs similar SOF support functions for U.S. Northern Command and is often referred to as a TSOC. Each one of these organizations is thoroughly familiar with SOF operational capabilities, limitations, support requirements, and are all charged with providing and integrating SOF expertise into joint operational planning.

SOF Requirements

Special operations forces require a reliable, secure, means of globally tracking personnel, mobility platforms, and equipment of high value using both Line of Sight and Beyond Line of Sight communications technologies. USSOCOM traditionally relies on a family-of-systems to support the SOF warfighter with BFT capabilities. A family-of-systems approach ensures that the ideal capability can be matched to assigned mission requirements. A system that is ideal to one mission may not be suited for another. For example, a BFT device utilized by a SOF submersible platform is most likely not the best BFT solution for an individual in a desert

environment. This SOF BFT capability must be integrated as a system of systems, to include existing and future tracking devices and mobility platform tracking capabilities. The BFT system utilized must be interoperable with existing collection and dissemination architectures and other communication devices that incorporate this capability. Interoperability of the BFT data is critical to enable BFT information to be properly integrated into the desired COP architecture when providing a situational awareness capability. Although there are numerous COP applications utilized by SOF, USSOCOM primarily uses common applications such as command and control personal computer (C2PC) and joint battlespace viewer (JBV) to view BFT data. C2PC and JBV receive the BFT data feeds through the Global Command and Control System - Joint (GCCS-J) information architecture. The utilization of common COP viewing applications facilitates relevant situational awareness among all echelons through integrated collaborative planning efforts.¹⁴

COP Capabilities

The “GCCS-J COP is a distributed data processing and exchange environment for developing a dynamic database of objects, allowing each user to filter and contribute to this database according to the user’s area of responsibility and command role. It is a key tool for commanders in planning and conducting joint operations and in monitoring execution and coordinating joint operations across combatant commands. The COP enhances the flow of information among the Secretary of Defense, Joint Staff, and combatant commanders (CCDRs), both supplementing and amplifying theater commander’s situation reports (SITREPs), operational reports (OPREP), and other reporting venues. The COP is a tool for sharing critical standing and situation dependent information across command structures to achieve success in the spectrum of operations. Regional CCDRs, the Services, and agencies identify relevant COP

data requirements and help develop automated COP data feeds to reduce manual track management tasks.”¹⁵ As a graphical display tool, the COP should utilize standardized reporting criteria, to enhance command and control capabilities for war, operations other than war, and training purposes. The GCCS-J COP provides critical situational awareness information for mission integration and support to commanders at all levels, including the Secretary of Defense and Joint Staff. The applicability of the COP to the Secretary of Defense and Joint Staff is identified by the following CJCS quote: “The COP provides necessary and vital battlespace information for the appropriate decision makers to provide strategic direction for combatant commanders in accordance with references defined COP reporting requirements and standardized COP operational architecture and data exchange formats. It also provides situational awareness to enable the Joint Staff to answer questions from the senior military leadership with minimum impact on the operational commanders.”¹⁶

The data that is integrated into the COP, to include BFT data, is normally the responsibility of the combatant commander in charge of an area of responsibility. The respective combatant commander must develop appropriate COP procedures to ensure inclusion of the forces under their command on the COP visualization tool. These procedures must include functions to deconflict and consolidate data in order to maintain an accurate and reliable global COP display.¹⁷ A well maintained COP is vital to the daily operations of operational and tactical level commanders, as well as support agencies involved in operations, since it provides relevant shared information to multiple commands in a single graphical display.¹⁸ Additionally, it is also vital that a well maintained, and relevant fused global COP is made available to higher level commanders, to include combatant commanders and support agencies within the Department of Defense. Without appropriate COP procedures and protocols, BFT transmitted data can become

difficult to ensure a relevant situational awareness picture as assets often transit between multiple geographic combatant commands during a single mission.

BFT systems must use common command, control, communications, and computers intelligence, surveillance, and reconnaissance (C4ISR) technologies to minimize costs and development efforts while maximizing system compatibility, functionality, and interoperability. It is imperative that the systems be interoperable with legacy, imminent, and emerging C4ISR architectures and employ an open system design to ensure compatibility, interoperability, and adaptability with future system developments. For mission success, it is important that BFT capabilities are available for use by conventional forces and select coalition forces supporting SOF. To help reduce fratricide, the distribution of BFT devices should not be limited or restricted to U.S. SOF only unless mission requirements dictate distribution requirements. Distributing only a limited numbers of devices often poses significant and problematic challenges for commanders since it promotes the development of a valuable, albeit incomplete, view of the battlespace environment. However, to best satisfy SOF mission requirements, asset priority, security concerns, classification issues, and interoperability of communication architectures are all factors that must be considered when determining the appropriate distribution of BFT assets.

Initial BFT Fielding

The development of SOF BFT capabilities began in the late 1990s as a result of operational requirements from SOCCENT and SOCPAC. The terrorist attacks of 11 September 2001 significantly accelerated the development, production, and utilization of SOF BFT capabilities to provide situational awareness and ability to command and control deployed SOF. The initial fielding of SOF BFT transmitters involved the Grenadier Brat, which was developed

by Boeing Company and provided by the U.S. Army, in limited numbers, to U.S. Army Special Operations Command (USASOC) and other SOF organizations for missions in both Afghanistan and Iraq.¹⁹ Subsequently, additional devices were purchased through the use of supplemental funding as a result of critical mission needs requirements. Numerous critical mission needs requirements (at that time they were called Combat Mission Needs Statements (CMNS)) were submitted immediately following the 11 September 2001 terrorist attacks, with some of the supplemental funding provided being augmented with additional funding obtained through the Defense Emergency Response Fund (DERF) program. A portion of the DERF funding was specifically provided for the initial procurement and fielding of miniature transmitter (MTX) BFT devices which quickly became the primary BFT device for SOF.²⁰

The MTX is essentially a miniaturized, hand-held variant of the Grenadier Brat made by General Dynamics Corporation. The MTX quickly became the basis of issue item for satisfying initial SOF BFT situational awareness and COP requirements due to its utility and reduced form factor.²¹ However, no SOF funding was allotted for further research and development or significant procurement; only minimal sustainment funding was obtained the original MTX devices. Additionally, no resources were provided to develop and document tactics, techniques, or procedures on the MTX or any other BFT device since BFT development basically occurred under the Warfighter Rapid Acquisition Program (WRAP),²² where critical items that demonstrate innovation and success are provided transitional funding for rapid development under an accelerated acquisition process for expeditious dissemination to deployed forces.²³ The WRAP process, conducted in coordination with USSOCOM Special Operations Acquisition and Logistics Intelligence and Information National Systems Support to SOF Branch (SOAL PEO-II NSSS), is able to significantly reduce acquisition timetables for critical capabilities and

streamline decision-making and development efforts. Compared to standard acquisition processes, WRAP efforts can rapidly provide warfighter support to deployed SOF in minimal time.

With limited resources, few, if any, BFT devices were ever available for training. Initial training for BFT devices was accomplished by Mobile Training Teams (MTT) in the field with the initial training proving to be very effective. However, training thereafter relied on a train-the-trainer concept for a majority of the training. Overtime, as a result of numerous force deployment rotations, the train-the-trainer concept proved much less effective. Often, the first opportunity a warfighter had to work with a BFT device occurred in theater just prior to commencement of a combat mission. Few devices were available for exercises which also prevented leadership from developing the skills and understanding necessary to interpret the COP for decision making purposes. Additionally the grenadier Brats and MTX devices being distributed to U.S. SOF forces without adequate training resulted in some instances of improper device operation by SOF warfighters. As a result of inadequate training, or thorough understanding of device capabilities and signal securities, it often resulted in the decision by SOF teams to not take BFT devices on missions. This lack of training was a factor that could have adversely impacted mission success if an emergency situation developed.

Part 3

Programmatics

As with most emerging technology, technical and programmatic complications, such as inadequate joint procurement funding, limited fielding capability and command and control systems interoperability shortfalls have caused some reliability concerns that we [USSOCOM] are already working to resolve. It is important that all Combatant Commanders, as well as Allied and Coalition Force Commanders, recognize the value of BFT and are engaged in the further maturation and proliferation of this capability.

—General Bryan D. Brown

A recurring requirement by combatant commanders (since 2002) for deployed SOF is to ensure BFT capabilities are provided by USSOCOM or service components prior to entering a theater command area of operation (AOR). Since SOF BFT is still in the infancy stage of fielding and tactics, techniques, and procedures (TTP) development, compliance with theater command deployment requirements for SOF forces is often falling short. The TSOCs, acknowledging the important role that BFT plays in command and control and modernized TTPs, have explored all available funding opportunities to procure BFT capabilities prior to deploying SOF into theater AORs. These actions, in response to urgent operational needs, have forced TSOCs to appear to perform the service-like Title 10 responsibilities of equipping forces, which are doctrinally the responsibility of service components or USSOCOM.²⁴ TSOC efforts to equip their forces have also caused unintended consequences. Devices were acquired, by whatever means necessary to accomplish mission requirements, with no subsequent sustainment funding. This hampers the ability replenish or repair fielded devices and does not promote

standardization of device purchasing, resulting in exhaustive integration efforts to support numerous, non-standard, versions of devices with the existing BFT family of systems.

BFT Program

In 2004 HQ USSOCOM Center for Special Operations, in close coordination with component commands and TSOCs, led the development of a Capabilities Development Document (CDD) to collectively determine projected SOF BFT requirements in accordance with the Chairman of the Joint Chiefs of Staff Instruction 3170.01 Series, “Joint Capabilities Integration and Development System.”²⁵ The CDD was staffed through the component commands and TSOCs for review and approval, and then forwarded to the Special Operations Command Requirements Evaluation Board (SOCREB) for final command approval. In addition, USSOCOM efforts were underway to establish BFT as an official program of record. To have any chance of successfully competing for Program Objective Memorandum (POM) resources, BFT needed to be a program of record and have an approved CDD.

The SOCREB approved the CDD and directed the Center for Acquisition and Logistics to stand-up BFT as an official USSOCOM program of record. However, the SOCREB authorized BFT program remained funded at the lowest level to only sustain previously acquired BFT transmitters. Additionally, the BFT program failed to qualify for adequate funding since the USSOCOM component commands, as service specific commands, continued to rank BFT as a low priority in their annual POM submissions to USSOCOM. Part of the inability to fund the effort was that the component commands voted during the POM process while the TSOC’s, responsible for command and control of the warfighters, were not allowed to vote on what effort received funding. As a result, BFT was not a high priority capability for the component commands, who did not exercise operational C2 on SOF, as it did to the TSOCs, who

collectively exercise direct command and control (e.g. deploy, redeploy, reassign, support, resupply) over SOF deployed for purpose within their geographic AOR. Again, no research and development or procurement funding was obtained and as a result, USSOCOM was unable to fulfill current or future BFT support requirements for SOF deploying into theater.

BFT requirements identified during the CDD development efforts were assessed by the Joint Community as SOF-unique due to certain defined security, size, weight, and other specified device requirements. This position sparked numerous service-common versus SOF-unique discussions that contributed to further delays in funding solutions for the BFT program. USSOCOM took the position that SOF BFT requirements should be satisfied by the Services (Army, Air Force, and Navy) even though the only viable Service ground-mobile BFT capability utilized by the Army did not satisfy the collectively approved SOF requirements as listed in the CDD. The debate continued for years between USSOCOM, the Services, and the Joint Community over the two distinct positions. None of these entities budged. As a result, necessary funding was not obligated by USSOCOM to support the BFT Program, with the exception of some funding to support the minimal sustainment of some existing systems. In effect, this action caused the BFT Program to be considered a non-viable program by the Program Manager. Consequently, resources supporting the program and its priority within the Command were reduced in order to apply limited resources to programs that were considered viable.

BFT has not been part of readiness reporting requirements since BFT devices have not historically been listed on units Tables of Organization and Equipment (TO&E) at the unit equipment level. The U.S. Army does include the FBCB2 BFT capability into their TO&E, however they have not entered SOF-unique BFT into the Army Special Forces TO&E.

USSOCOM would essentially have to identify SOF BFT as SOF-unique before this could be entered into the Army TO&E. Therefore, BFT remains off the TO&E equipment lists and is not a reportable end item. The USSOCOM Center for Special Operations, Readiness Branch, and the Services are currently involved in discussions to identify ways of addressing SOF-unique items through various service readiness systems. Once the details are worked out in the various service systems, BFT should be able to be identified as a reportable item through appropriate readiness venues. This will not only illustrate the fact that BFT is an important operational requirement, but will also highlight capability shortfalls that often result in subsequent action to correct the deficiency.²⁶

Identifying BFT as a reportable item will provide a significant increase in credibility to the overall BFT program. It could result in viable programmatic authority by BFT program management to spend Major Force Program-11 (MFP-11) funds to support SOF requirements by equipping deployed SOF with required BFT capabilities. This would greatly support the efforts and responsibilities of the USSOCOM BFT program management office.

Part 4

Conclusions and Recommendations

BFT is a critical capability. We were able to provide superb situational awareness of SOF internally and with our warfighting partners – on the ground, sea, and air due to proactive fielding of BFT beacons. This program will reduce the incidence of fratricide and greatly enhance our situational awareness on a fluid and dynamic battlefield.

—General Bryan D. Brown

All Services and Departments have seen the value of BFT and initiatives are underway to facilitate BFT interoperability, force-wide BFT requirements should be collected and programmed for rapid, joint acquisition.

—General Bryan D. Brown

This paper set out to discuss BFT and how it has become an invaluable tool to deployed SOF. For a capability to evolve and become a relied-upon tool for SOF utilization, it must acquire and maintain legitimacy in order to maintain long-term viability. USSOCOM is in a position to leverage its unique authorities and capabilities as a force-providing combatant command to enhance BFT program support and provide an invaluable tool to deployed SOF, better satisfy TSOC SOF mission requirements, alleviate the scarcity of mission critical BFT capabilities, and promote effective training opportunities. There are a number of support efforts USSOCOM can promote to contribute to lasting contributions of future SOF BFT capabilities. The subsequent recommendations are intended to enhance overall SOF BFT capabilities, improve situational awareness of deployed SOF forces, and most importantly, save lives.

Funding

The fundamental issues for degraded BFT capabilities, like many other programs, revolve around adequate funding. Program funding is the critical first step toward equipping deployed SOF with required BFT capabilities. If the SOF BFT program is expected to satisfy deployed SOF requirements, it is imperative that USSOCOM advocate for, and provide, adequate funding to build and sustain a strong and viable BFT program. BFT program funding must be used to satisfy collective SOF requirements and be predominately driven by TSOC mission needs, not strictly HQ and component command needs as defined by POM submission criteria. A strong and viable BFT program would lead to the continued development and utilization of superior capabilities that are indicative of special operations. This could, in turn, provide immeasurable battlefield situational awareness enhancements to commanders throughout the entire SOF community while satisfying geographic combatant commander's AOR-specific BFT requirements for deployed SOF.

Standardization and Integration

SOF will undoubtedly continue to rely on a family of BFT system to meet demanding mission requirements. However, standardization of BFT systems along with the need for additional, effective training within the SOF family of BFT systems will negate the need for numerous device variants. Consolidation of requirements from TSOCs and SOF subordinate component commands, a robust research and development effort, and a focused vision will result in better management of scarce resources and provide better support to the SOF warfighter. A strong program could help eliminate subordinate commands and TSOCs from acquiring their own unique, not always interoperable, BFT devices and then expecting HQ USSOCOM, or often referred to as “mother SOCOM”, to fund the non-resourced sustainment tails (air time,

maintenance, support staff, etc). In essence, a standardized program, complete with the necessary funding and authorities to accomplish program objectives could result in a one-stop shop for identifying and satisfying SOF BFT requirements.

A new SOF BFT vision should be developed for SOF BFT beginning with a paradigm shift in thinking. It should be expected that all SOF personnel and platforms have an affordable BFT/Combat Identification (CID) capability. The goal should be to improve the tactical commander's ability to control all of their forces and improve situational awareness from the tactical through the strategic command structures. Also, a secure and robust capability should be developed to allow sharing with coalition and conventional forces supporting SOF.²⁷ This has become critically important since U.S. SOF increasingly operate with, and train, allied and coalition SOF personnel. Additionally, reduction of fratricide through an effective BFT/CID effort should become a top priority. Integration of BFT/CID into radios or distribution of the BFT/CID capability to all SOF will significantly reduce fratricide among SOF and SOF's supporting forces. This enhancement to BFT will add to the pool of resources for aiding in the emergency extraction of forces under duress and could, if needed, help in recovery efforts.

Single Card Solution

BFT technology has advanced tremendously over the last few years. To promote future standardization and interoperability efficiencies, advancements in technology must be embraced to ensure cutting-edge technologies are integrated into next-generation capabilities. There is currently an initiative being developed by a government contractor, and partially resourced by other government entities, to produce a “single card solution” capability. This solution will provide SOF warfighters a communications system capability that can be tailored to fully integrate voice, data, BFT, and CID communications.²⁸ The “single card solution” initiative

could provide many of the desired capabilities and solve many of the SOF requirements. Integration and insertion of a single card solution into all tactical radios certainly appears achievable in the near future. If this capability comes to fruition and is properly developed and utilized, this could drastically decrease the number of different equipment devices required of SOF personnel to carry with them when operationally deploy. Not only could this decrease the weight of gear required for transport and carrying by forces, but it could potentially reduce overall Tile 10 equipping costs by consolidating multiple communications and BFT requirement capabilities into a single form factors. USSOCOM support to this effort could add increased credibility to the initiative and possibly streamline developmental and fielding efforts. The support provided can be simply that of operational interest without USSOCOM being required to supply any funding for development of the initiative. The minimal investment of time required to support this initiative has the potential to reap large rewards through professional working relationships when prioritizing the implementation and delivery of future BFT-capable products.

Training

Training is probably one of the most important, forgotten, and unfunded requirements in the BFT community. Considering BFT is a relatively new capability and is linked to other cutting-edge C2 system capabilities, such as the COP, it is essential that training is emphasized and supported. Emphasis in training should include BFT device operators, COP managers, and even more importantly, the commanders that rely on forces to carry BFT devices into battle. Commanders need to become more familiar with the interpretation of the huge amounts of data feeding the COP, which is used to provide a relevant situational awareness picture. Leaders must understand the limitations of the various systems, signal latency implications, and what data is valid and invalid within the systems that may affect decision making processes.

TTPs should be developed for everyone touching the BFT architecture, from the warfighter to the commander. TTP development has significantly been overlooked throughout SOF BFT history. Instead of utilizing a common set of SOF BFT procedures, individual organizations have typically developed procedures independently. Some SOF unit TTPs stated that BFT was only to be used for transmitting during troop movement. Other SOF units required BFT transmissions at predetermined time intervals. The question of how old BFT data can be, and still be relied upon to produce relevant battlefield awareness, has long been a topic of debate. For example, three hundred hour old data could still be valid, and certainly was during the early days of OIF because of non-standard TTP usage, although many individuals would have discounted that information. A good track manager can be of great assistance to commanders by maintaining constant awareness of disparate data. A track manager can also identify systems that are either displaying inaccurate information or assist commanders in the security of their forces by identifying individuals, friendly or hostile, in undesirable or unintended locations. The need for adequate BFT training at all levels is critical to fully understand and utilize the technological capabilities and opportunities afforded by BFT systems in SOF operations.

In conclusion, the recommendations discussed in this paper emphasize the need for not only funding, but just as important, a better understanding of the capabilities made possible by embracing the technological advantages made possible by BFT systems. The increasing demand and utility of BFT capabilities in SOF operations is undeniable, and ever-growing. By better understanding the situational awareness advantages afforded by the dramatic leap in battlefield visibility, SOF can embrace and leverage next-generation BFT technology developments to remain on the cutting-edge of warfighter capabilities.

Notes

- ¹ Dunn, “BFT: Afghanistan and Iraq”, 1.
- ² Ibid., 1.
- ³ Baddeley, *BFT Lifts the Fog of War*, 43.
- ⁴ JP-1, “*Doctrine for the Armed Forces*”, III-10.
- ⁵ Dunn, “BFT: Afghanistan and Iraq”, 4.
- ⁶ Ibid., 10.
- ⁷ Brown, “USSOCOM Testimony to House”, 11 March 2004.
- ⁸ JP 3-0, “*Joint Operations*”, III-9.
- ⁹ Space Command, “Enabling Concept for BFT”, 2.
- ¹⁰ JSOU, “*SOF Reference Manual*”, 2-11.
- ¹¹ Ibid., 2-11.
- ¹² USC Code, Title 10, Section 167.
- ¹³ JSOU, “*SOF Reference Manual*”, 2-15.
- ¹⁴ JP 3-0, “*Joint Operations*”, GL-9.
- ¹⁵ CJCSI 3151.01B, 31 October 2008, 2.
- ¹⁶ Ibid., 2.
- ¹⁷ Ibid., A-3.
- ¹⁸ JP 3-0, “*Joint Operations*”, GL-9.
- ¹⁹ Baddeley, *BFT Lifts the Fog of War*, 49.
- ²⁰ Phone conversation with USSOCOM officer, 17 December 2008. (unattributed interview)
- ²¹ Baddeley, *BFT Lifts the Fog of War*, 49.
- ²² Ibid., 49.
- ²³ Buhrkuhl, *Warfigher Needs it Now*, 31.
- ²⁴ USC Code, Title 10, Section 167.
- ²⁵ CJCSI 3170.01F, “JCIDS”, Enc A.
- ²⁶ Phone conversation with USSOCOM officer, 6 February 2009. (unattributed interview)
- ²⁷ Phone conversation with USSOCOM officer, 15 October 2008. (unattributed interview)
- ²⁸ USJFCOM, CID BFT ESC, 38.

Glossary

AOR	Area of Responsibility
BFT	Blue Force Tracking
C2	Command and Control
C2PC	Command Control Personal Computer
C4ISR	Command, Control, Communications, and Computers Intelligence, Surveillance, and Reconnaissance
CCDR	Combatant Commander
CDD	Capabilities Development Document
CID	Combat Identification
CJCS	Chairman, Joint Chiefs of Staff
CMNS	Combat Mission Needs Statement
COP	Common Operational Picture
DERF	Defense Emergency Response Fund
DOD	Department of Defense
FBCB2	Force XXI Battlefield Command Brigade and Below
GCCS-J	Global Command and Control System - Joint
HQ	Headquarters
ISR	Intelligence, Surveillance, and Reconnaissance
JBV	Joint Battlespace Viewer
MTT	Mobile Training Team
MTX	Miniature Transmitter
NSSS	National Systems Support to Special Operations Forces
OEF	Operation ENDURING FREEDOM
OIF	Operation IRAQI FREEDOM
OPCON	Operational Control
OPREP	Operational Report

SITREP	Situation Report
SOAL	Special Operations Acquisition and Logistics
SOC	Special Operations Command
SOCAFRICA	Special Operations Command, Africa
SOCEUR	Special Operations Command, Europe
SOCCENT	Special Operations Command, Central
SOCJFCOM	Special Operations Command, Joint Forces
SOCKOR	Special Operations Command, Korea
SOCPAC	Special Operations Command, Pacific
SOCREB	Special Operations Command Requirements Evaluation Board
SOCSOUTH	Special Operations Command, Southern
SOD	Special Operations Detachment
SOF	Special Operations Forces
SORTS	Status of Resources and Training
TO&E	Table of Organization and Equipment
TSOC	Theater Special Operations Command
TPP	Tactics, Techniques, and Procedures
U.S.	United States
USASOC	United States Army Special Operations Command
USFK	United States Forces, Korea
USSOCOM	United States Special Operations Command
WRAP	Warfighter Rapid Acquisition Program

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